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Fact Sheet

Exotic Newcastle Disease

Exotic Newcastle disease (END) is a contagious highly fatal viral disease affecting all species of birds. END is one of the most infectious diseases of poultry in the world. END is so virulent that many birds die without showing any clinical signs. A death rate of almost 100 percent can occur in unvaccinated poultry flocks while still killing birds that have been vaccinated. California has found that the mortality rate in vaccinated commercial layer flocks has doubled or tripled the normal death rate.

What are the clinical signs?

Exotic Newcastle affects the respiratory, nervous, and digestive systems. The incubation period for the disease ranges from 2 to 15 days. An infected bird may exhibit the following signs:

- Respiratory: sneezing, gasping for air, nasal discharge, coughing
- Digestive: greenish, watery diarrhea
- Nervous: depression, muscular tremors, drooping wings, twisting of head and neck, circling, complete paralysis
- Other clinical signs: partial to complete drop in egg production, production of thin-shelled eggs, swelling of the tissues around the eyes and in the neck, sudden death, increased death loss in a flock.

How Does Exotic Newcastle Spread?

END is spread primarily through direct contact between healthy birds and the bodily discharges of infected birds. The disease is transmitted through infected birds' droppings and secretions from the nose, mouth, and eyes. END spreads rapidly among birds kept in confinement, such as commercially raised chickens and turkeys. High concentrations of the exotic Newcastle virus are in birds' bodily discharges. Therefore, the disease can be spread easily by mechanical means. Virus-bearing material can be picked up on shoes and clothing and carried from an infected flock to a healthy one. The disease is often spread by vaccination and debeaking crews, manure haulers, rendering-truck drivers, feed delivery personnel, poultry buyers, egg service people, and poultry farm owners and employees. The END virus can survive for several weeks in a warm and humid environment on birds' feathers, manure, and other materials. It can survive indefinitely in frozen material. However, the virus is destroyed rapidly by dehydration and by the ultraviolet rays in sunlight.

How can I prevent it?

The only way to eradicate exotic Newcastle from commercial poultry is by rapidly destroying all infected flocks and imposing strict quarantine and in-depth surveillance programs. Poultry producers should strengthen biosecurity practices to prevent the introduction of the disease to their flocks. Biosecurity is also important to protect backyard and hobby flocks. The following are tips on proper biosecurity practices:

- Permit only essential workers and vehicles on the premises. Employees must not have contact with backyard flocks (especially fighting cocks).
- Provide clean clothing and disinfection facilities for all visitors and employees.
- Clean and disinfect vehicles entering and leaving the farm.
- Avoid visiting other poultry operations.
- Keep birds confined and separated from free-roaming chickens.
- Protect flocks from wild birds that may try to nest in poultry houses or feed with domesticated birds.
- Control movements associated with the disposal and handling of bird carcasses, litter, and manure.
- Take diseased birds to a diagnostic laboratory for examination.
- Use disinfectants.